

# INDEX TO VOLUME 113

## INDEX TO SUBJECTS

A Stars, Lines of Neutral Oxygen in the Infrared Spectra of Peculiar. <i>Arne Slettebak</i> . . . . .	437
AlBr Molecule, A New Band System of the. <i>Devendra Sharma</i> . . . . .	219
AlCl Molecule, Two New Band Systems of the. <i>Devendra Sharma</i> . . . . .	210
R Andromedae (Maximum) and $\mu$ Cephei between 7400 and 8800 Å, The Spectra of. <i>L. H. Aller and P. C. Keenan</i> . . . . .	72
$\epsilon$ Aurigae, Circumstellar Lines of Ca II in the Spectrum of. <i>Otto Struve</i> . . . . .	699
$\zeta$ Aurigae: Photoelectric Observations of the Partial Phase at Egress on September 20, 1950. <i>Arthur Beer and Michael W. Ovenden</i> . . . . .	439
Auroral Hydrogen Emission, Doppler-shifted. <i>A. B. Meinel</i> . . . . .	50
Auroral Spectrum from 6200 to 8900 Å, The. <i>A. B. Meinel</i> . . . . .	583
B Stars of High Luminosity, A Finding List of O and. <i>J. J. Nassau and W. W. Morgan</i> . . . . .	141
BD+11°4673 during the Years 1942-1950, The Spectrum of. <i>Paul W. Merrill</i> . . . . .	605
BD+28°4211, The Color of. <i>Daniel L. Harris III</i> . . . . .	435
BD+36°3991, The Wolf-Rayet Spectroscopic Binary. <i>W. A. Hillner</i> . . . . .	317
Be Stars, Hydrogen and Helium Line Intensities in Some. <i>E. Margaret Burbidge and G. R. Burbidge</i> . . . . .	84
Be Stars, Spectroscopic Observations of. <i>William C. Miller and Paul W. Merrill</i> . . . . .	624
c Stars, Spectral Classification of Stars Listed in Miss Payne's Catalogue of. <i>William P. Bidelman</i> . . . . .	304
C <sub>2</sub> Swan Bands, Calculated Transition Probabilities for the. <i>Andrew McKellar and N. R. Tawde</i> . . . . .	440
Ca II in the Spectrum of $\epsilon$ Aurigae, Circumstellar Lines of. <i>Otto Struve</i> . . . . .	699
Calcium Lines in the Spectrum of HD 190073, Displaced. <i>Paul W. Merrill</i> . . . . .	55
Camera, Photographs with the Henyey-Greenstein Wide-Angle. <i>Donald Osterbrock and Stewart Sharpless</i> . . . . .	222
RS Canum Venaticorum and YY Sagittarii, A Photoelectric Study of the Eclipsing Stars. <i>G. Keller and D. N. Limber</i> . . . . .	637
$\mu$ Cephei between 7400 and 8800 Å, The Spectra of R Andromedae (Maximum) and. <i>L. H. Aller and P. C. Keenan</i> . . . . .	72
Cepheid Variable Stars, Magnitudes and Colors of Classical. Photoelectric Studies. V. <i>Olin J. Eggen</i> . . . . .	367
Chromium and Nickel, Absolute Oscillator Strengths of. <i>Frank B. Estabrook</i> . . . . .	684
Color of BD+28°4211, The. <i>Daniel L. Harris III</i> . . . . .	435
Color Indices for Some Further White Dwarfs and Degenerate Stars, Apparent Magnitudes and. <i>Willem J. Luyten</i> . . . . .	701
Color-Magnitude Array for Stars in the Globular Cluster M 15, The. <i>Archibald Brown</i> . . . . .	344
Color-Magnitude Diagram for M 15, On the. <i>Harold L. Johnson and Martin Schwarzschild</i> . . . . .	630
Comet Model, A. II. Physical Relations for Comets and Meteors. <i>Fred L. Whipple</i> . . . . .	464
Cr I, The Solar Curve of Growth for Lines of. <i>Allan R. Sandage and Armin J. Hill</i> . . . . .	525
Curve of Growth for Lines of Cr I, The Solar. <i>Allan R. Sandage and Armin J. Hill</i> . . . . .	525
$\chi$ Cygni, Absorption Lines and Bands in the Spectrum of. <i>Y. Fujita</i> . . . . .	626
Emission-Line Stars, Notice concerning Late-Type. <i>William P. Bidelman</i> . . . . .	705
Errata . . . . .	705
Galaxies, On the Stellar Dynamics of Spherical. <i>J. Belzer, G. Gamow, and G. Keller</i> . . . . .	166
Galaxies, Stellar Populations and Collisions of. <i>Lyman Spitzer, Jr., and Walter Baade</i> . . . . .	413
Galaxy as Determined from Measurements at 205 Mc/Sec, The Pole of the. <i>Charles L. Seeger and Ralph E. Williamson</i> . . . . .	21
Globular Cluster M 15, The Color-Magnitude Array for Stars in the. <i>Archibald Brown</i> . . . . .	344
HD 26—an Unusual High-Velocity Star. <i>Philip C. Keenan and Geoffrey Keller</i> . . . . .	700
HD 190073, Displaced Calcium Lines in the Spectrum of. <i>Paul W. Merrill</i> . . . . .	55

HD 217050, The Spectrum of. <i>E. Margaret Burbidge and G. R. Burbidge</i>	703
$He^3$ in the Sun, A Search for. <i>Jesse L. Greenstein</i>	531
Hydrogen Emission, Doppler-shifted Auroral. <i>A. B. Meinel</i>	50
Hydrogen and Helium Line Intensities in Some Be Stars. <i>E. Margaret Burbidge and G. R. Burbidge</i>	84
Interstellar Band at $\lambda$ 4430, Intensities of the. <i>Douglas Duke</i>	100
Interstellar Medium, Turbulence in the. <i>L. H. Aller</i>	120
Interstellar Space, The Density of Molecules in. <i>David R. Bates and Lyman Spitzer, Jr.</i>	441
12 Lacertae, The Velocity-Curve of. <i>Otto Struve</i>	589
AR Lacertae, The Spectra and Orbits of. <i>Roscoe F. Sanford</i>	299
Lines in the Photographic Region of Some Late-Type Stars, The Weaker. <i>Suzanne van Dijke Beatty</i>	93
Lithium and the Internal Circulation of the Sun. <i>Jesse L. Greenstein and Robert S. Richardson</i>	536
Luminosity Function, Variations in the Stellar. IV. A Region in Cepheus-Lacerta. <i>S. W. McCuskey</i>	672
M 15, The Color-Magnitude Array for Stars in the Globular Cluster. <i>Archibald Brown</i>	344
M 15, On the Color-Magnitude Diagram for. <i>Harold L. Johnson and Martin Schwarzschild</i>	630
M 39, Color-Luminosity Arrays for Stars in Praesepe and in. Photoelectric Studies. VI. <i>Olin J. Eggen</i>	657
Magnitudes and Color Indices for Some Further White Dwarfs and Degenerate Stars, Apparent. <i>Willem J. Luyten</i>	701
Magnitudes for 125 Stars in Ten Areas, Red and Infrared. <i>Gerald E. Kron and J. Lynn Smith</i>	324
Meteor Velocities Determined by Radio Observations. <i>D. W. R. McKinley</i>	225
Meteors, The Physical Theory of. I. A Reaction-Rate Approach to the Rate of Mass Loss in Meteors. <i>M. A. Cook, H. Eyring, and R. N. Thomas</i>	475
Methane in the Earth's Atmosphere, The Abundance and Vertical Distribution of. <i>Leo Goldberg</i>	567
Molecules in Interstellar Space, The Density of. <i>David R. Bates and Lyman Spitzer, Jr.</i>	441
Nebulae, Spectrophotometry of Representative Planetary. <i>Lawrence H. Aller</i>	125
Negative Hydrogen Ion, Note on the Doubly Excited State of the. <i>Egil Hylleraas</i>	704
NGC 1999, The Spectra of Two Nebulous Objects near. <i>George H. Herbig</i>	697
Nickel, Absolute Oscillator Strengths of Chromium and. <i>Frank B. Estabrook</i>	684
Nitrous Oxide Band at $8.6\mu$ , Rotational Structure in the R Branch of the. <i>Arthur Adel</i>	222
Nova Sagittae of 1783, The Identification of D'Agelet's. <i>Harold F. Weaver</i>	320
O and B Stars of High Luminosity, A Finding List of. <i>J. J. Nassau and W. W. Morgan</i>	141
O Star at High Galactic Latitude, A Peculiar. <i>Donald A. MacRae, Robert Fleischer, and Edwin B. Weston</i>	432
Oscillator Strengths and the $f$ -Sum Rule, The Use of Calculated and Observed Energies in the Computation of. <i>Louis C. Green, Nancy E. Weber, and Eleanor Krawitz</i>	690
Oxygen in the Infrared Spectra of Be Stars, Lines of Neutral. <i>Arne Slettebak</i>	436
Oxygen in the Infrared Spectra of Peculiar A Stars, Lines of Neutral. <i>Arne Slettebak</i>	437
Parallaxes and Schlesinger's Probable Errors, Concerning Eggen's. <i>A. N. Vyssotsky</i>	224
Peculiar Objects, A List of Newly Discovered. <i>Miriam E. Walther Jaffe</i>	223
Photoelectric Studies. V. Magnitudes and Colors of Classical Cepheid Variable Stars. <i>Olin J. Eggen</i>	367
Photoelectric Studies. VI. Color-Luminosity Arrays for Stars in Praesepe and in M 39. <i>Olin J. Eggen</i>	657
Photoelectric Studies. VII. Color and Magnitude Systems for Brighter Stars and the Color-Spectral-Type Relation. <i>Olin J. Eggen</i>	663
Planetary Nebulae, Spectrophotometry of Representative. <i>Lawrence H. Aller</i>	125
Praesepe and in M 39, Color-Luminosity Arrays for Stars in. Photoelectric Studies. VI. <i>Olin J. Eggen</i>	657
Procyon, The Orbit and Parallax of. <i>K. Aa. Strand</i>	1
Prominence of August 7, 1950, The Eruptive. <i>Helen W. Dodson and Robert W. Donselman</i>	519
Radiation, Transfer of. II. Radiative Transfer in Absorption Lines. <i>Donald H. Menzel and Hari K. Sen</i>	482

Radiation, Transfer of. III. Reflection Effect in Eclipsing Binaries. <i>Donald H. Menzel and Hari K. Sen</i>	490
YY Sagittarii, A Photoelectric Study of the Eclipsing Stars RS Canum Venaticorum and. <i>G. Keller and D. N. Limber</i>	637
Shock Waves in the Generalized Roche Model, Propagation of. <i>Pierre A. Carrus, Phyllis A. Fox, Felix Haas, and Zdeněk Kopal</i>	193
Shock Waves in a Stellar Model with Continuous Density Distribution, The Propagation of. <i>Pierre A. Carrus, Phyllis A. Fox, Felix Haas, and Zdeněk Kopal</i>	496
Solar Spectrum from 3.0 to 5.2 $\mu$ , A Grating Map of the. <i>J. H. Shaw, R. M. Chapman, J. N. Howard, and M. L. Oxholm</i>	268
Source Functions by an Extension of Chandrasekhar's Limiting Process, Exact. <i>Vladimir Kourganoff</i>	419
Spectra of R Andromedae (Maximum) and $\mu$ Cephei between 7400 and 8800 Å, The. <i>L. H. Aller and P. C. Keenan</i>	72
Spectra of Be Stars, Lines of Neutral Oxygen in the Infrared. <i>Arne Slettebak</i>	436
Spectra and Orbits of AR Lacertae, The. <i>Roscoe F. Sanford</i>	299
Spectra of Peculiar A Stars, Lines of Neutral Oxygen in the Infrared. <i>Arne Slettebak</i>	437
Spectra of Two Nebulous Objects near NGC 1999, The. <i>George H. Herbig</i>	697
Spectra of Variables of the RV Tauri and Yellow Semiregular Types, The. <i>L. Rosino</i>	60
Spectral Classification of Stars Listed in Miss Payne's Catalogue of c Stars. <i>William P. Bidelman</i>	304
Spectroscopic Observations of Be Stars. <i>William C. Miller and Paul W. Merrill</i>	624
Spectrum from 3.0 to 5.2 $\mu$ , A Grating Map of the Solar. <i>J. H. Shaw, R. M. Chapman, J. N. Howard, and M. L. Oxholm</i>	268
Spectrum from 6200 to 8900 Å, The Auroral. <i>A. B. Meinel</i>	583
Spectrum of $\epsilon$ Aurigae, Circumstellar Lines of Ca II in the. <i>Otto Struve</i>	699
Spectrum of BD +11°4673 during the Years 1942-1950, The. <i>Paul W. Merrill</i>	605
Spectrum of $\chi$ Cygni, Absorption Lines and Bands in the. <i>Yoshio Fujita</i>	626
Spectrum of HD 217050, The. <i>E. Margaret Burbidge and G. R. Burbidge</i>	703
Star, HD 26—an Unusual High-Velocity. <i>Philip C. Keenan and Geoffrey Keller</i>	700
Stars, A Finding List of High-Luminosity. <i>Luis Münch</i>	309
Stellar Atmospheres, Radiation Field of Extended. <i>S. Miyamoto</i>	181
Stellar Statistics, On. <i>S. Chandrasekhar and G. Münch</i>	150
Sun, Lithium and the Internal Circulation of the. <i>Jesse L. Greenstein and Robert S. Richardson</i>	536
Sun, A Search for He <sup>3</sup> in the. <i>Jesse L. Greenstein</i>	531
Sun's Atmosphere Measured at Radio Frequencies, Temperature Gradient in the. <i>John P. Hagen</i>	547
RV Tauri and Yellow Semiregular Types, The Spectra of Variables of the. <i>L. Rosino</i>	60
Temperature Gradient in the Sun's Atmosphere Measured at Radio Frequencies. <i>John P. Hagen</i>	547
White Dwarfs and Degenerate Stars, Apparent Magnitudes and Color Indices for Some Further. <i>Willem J. Luyten</i>	701
Wolf-Rayet Spectroscopic Binary BD +36°3991, The. <i>W. A. Hiltner</i>	317

# INDEX TO AUTHORS

ADEL, ARTHUR. Rotational Structure in the <i>R</i> Branch of the Atmospheric Nitrous Oxide Band at $8.6\ \mu$	222
ALLER, L. H. Turbulence in the Interstellar Medium	120
ALLER, L. H., and P. C. KEENAN. The Spectra of R Andromedae (Maximum) and $\mu$ Cephei between 7400 and 8800 Å	72
ALLER, LAWRENCE H. Spectrophotometry of Representative Planetary Nebulae	125
BAADE, WALTER, and LYMAN SPITZER, JR. Stellar Populations and Collisions of Galaxies	413
BATES, DAVID R., and LYMAN SPITZER, JR. The Density of Molecules in Interstellar Space	441
BEATTY, SUZANNE VAN DIJKE. The Weaker Lines in the Photographic Region of Some Late-Type Stars	93
BEER, ARTHUR, and MICHAEL W. OVENDEN. $\zeta$ Aurigae: Photoelectric Observations of the Partial Phase at Egress on September 20, 1950	439
BELZER, J., G. GAMOW, and G. KELLER. On the Stellar Dynamics of Spherical Galaxies	166
BIDELMAN, WILLIAM P. Notice concerning Late-Type Emission-Line Stars	705
BIDELMAN, WILLIAM P. Spectral Classification of Stars Listed in Miss Payne's Catalogue of c Stars	304
BROWN, ARCHIBALD. The Color-Magnitude Array for Stars in the Globular Cluster M 15	344
BURBIDGE, E. MARGARET, and G. R. BURBIDGE. Hydrogen and Helium Line Intensities in Some Be Stars	84
BURBIDGE, E. MARGARET, and G. R. BURBIDGE. The Spectrum of HD 217050	703
BURBIDGE, G. R., and E. MARGARET BURBIDGE. Hydrogen and Helium Line Intensities in Some Be Stars	84
BURBIDGE, G. R., and E. MARGARET BURBIDGE. The Spectrum of HD 217050	703
CARRUS, PIERRE A., PHYLLIS A. FOX, FELIX HAAS, and ZDENĚK KOPAL. Propagation of Shock Waves in the Generalized Roche Model	193
CARRUS, PIERRE A., PHYLLIS A. FOX, FELIX HAAS, and ZDENĚK KOPAL. The Propagation of Shock Waves in a Stellar Model with Continuous Density Distribution	496
CHANDRASEKHAR, S., and G. MÜNCH. On Stellar Statistics	150
CHAPMAN, R. M., J. H. SHAW, J. N. HOWARD, and M. L. OXHOLM. A Grating Map of the Solar Spectrum from 3.0 to 5.2 Microns	268
COOK, M. A., H. EYRING, and R. N. THOMAS. The Physical Theory of Meteors. I. A Reaction-Rate Approach to the Rate of Mass Loss in Meteors	475
DODSON, HELEN W., and ROBERT W. DONSELMAN. The Eruptive Prominence of August 7, 1950	519
DONSELMAN, ROBERT W., and HELEN W. DODSON. The Eruptive Prominence of August 7, 1950	519
DUKE, DOUGLAS. Intensities of the Interstellar Band at $\lambda$ 4430	100
EGGEN, OLIN J. Photoelectric Studies. V. Magnitudes and Colors of Classical Cepheid Variable Stars	367
EGGEN, OLIN J. Photoelectric Studies. VI. Color-Luminosity Arrays for Stars in Praesepe and in M 39	657
EGGEN, OLIN J. Photoelectric Studies. VII. Color and Magnitude Systems for Brighter Stars and the Color-Spectral-Type Relation	663
ESTABROOK, FRANK B. Absolute Oscillator Strengths of Chromium and Nickel	684
EYRING, H., M. A. COOK, and R. N. THOMAS. The Physical Theory of Meteors. I. A Reaction-Rate Approach to the Rate of Mass Loss in Meteors	475
FLEISCHER, ROBERT, DONALD A. MACRAE, and EDWIN B. WESTON. A Peculiar O Star at High Galactic Latitude	432
FOX, PHYLLIS A., PIERRE A. CARRUS, FELIX HAAS, and ZDENĚK KOPAL. Propagation of Shock Waves in the Generalized Roche Model	193
FOX, PHYLLIS A., PIERRE A. CARRUS, FELIX HAAS, and ZDENĚK KOPAL. The Propagation of Shock Waves in a Stellar Model with Continuous Density Distribution	496



FUJITA, YOSHIO. Absorption Lines and Bands in the Spectrum of $\chi$ Cygni	626
GAMOW, G., J. BELZER, and G. KELLER. On the Stellar Dynamics of Spherical Galaxies	166
GOLDBERG, LEO. The Abundance and Vertical Distribution of Methane in the Earth's Atmosphere	567
GREEN, LOUIS C., NANCY E. WEBER, and ELEANOR KRAWITZ. The Use of Calculated and Observed Energies in the Computation of Oscillator Strengths and the $f$ -Sum Rule	690
GREENSTEIN, JESSE L. A Search for $He^3$ in the Sun	531
GREENSTEIN, JESSE L., and ROBERT S. RICHARDSON. Lithium and the Internal Circulation of the Sun	536
HAAS, FELIX, PIERRE A. CARRUS, PHYLLIS A. FOX, and ZDENĚK KOPAL. Propagation of Shock Waves in the Generalized Roche Model	193
HAAS, FELIX, PIERRE A. CARRUS, PHYLLIS A. FOX, and ZDENĚK KOPAL. The Propagation of Shock Waves in a Stellar Model with Continuous Density Distribution	496
HAGEN, JOHN P. Temperature Gradient in the Sun's Atmosphere at Radio Frequencies	547
HARRIS, DANIEL L., III. The Color of BD+28°4211	435
HERBIG, GEORGE H. The Spectra of Two Nebulous Objects near NGC 1999	697
HILL, ARMIN J., and ALLAN R. SANDAGE. The Solar Curve of Growth for Lines of Cr I	525
HILTNER, W. A. The Wolf-Rayet Spectroscopic Binary BD+36°3991	317
HOWARD, J. N., J. H. SHAW, R. M. CHAPMAN, and M. L. OXHOLM. A Grating Map of the Solar Spectrum from 3.0 to 5.2 Microns	268
HYLLERAAS, EGLI. Note on the Doubly Excited State of the Negative Hydrogen Ion	704
JAFFE, MIRIAM E. WALTHER. A List of Newly Discovered Peculiar Objects	223
JOHNSON, HAROLD L., and MARTIN SCHWARZSCHILD. On the Color-Magnitude Diagram for M 15	630
KEENAN, P. C., and L. H. ALLER. The Spectra of R Andromedae (Maximum) and $\mu$ Cephei between 7400 and 8800 Å	72
KEENAN, PHILIP C., and GEOFFREY KELLER. HD 26—an Unusual High-Velocity Star	700
KELLER, G., J. BELZER, and G. GAMOW. On the Stellar Dynamics of Spherical Galaxies	166
KELLER, G., and D. N. LIMBER. A Photoelectric Study of the Eclipsing Stars RS Canum Venaticorum and YY Sagittarii	637
KELLER, GEOFFREY, and PHILIP C. KEENAN. HD 26—an Unusual High-Velocity Star	700
KOPAL, ZDENĚK, PIERRE A. CARRUS, PHYLLIS A. FOX, and FELIX HAAS. Propagation of Shock Waves in the Generalized Roche Model	193
KOPAL, ZDENĚK, PIERRE A. CARRUS, PHYLLIS A. FOX, and FELIX HAAS. The Propagation of Shock Waves in a Stellar Model with Continuous Density Distribution	496
KOURGANOFF, VLADIMIR. Exact Source Functions by an Extension of Chandrasekhar's Limiting Process	419
KRAWITZ, ELEANOR, LOUIS C. GREEN, and NANCY E. WEBER. The Use of Calculated and Observed Energies in the Computation of Oscillator Strengths and the $f$ -Sum Rule	690
KRON, GERALD E., and J. LYNN SMITH. Red and Infrared Magnitudes for 125 Stars in Ten Areas	324
LIMBER, D. N., and G. KELLER. A Photoelectric Study of the Eclipsing Stars RS Canum Venaticorum and YY Sagittarii	637
LUYTEN, WILLEM J. Apparent Magnitudes and Color Indices for Some Further White Dwarfs and Degenerate Stars	701
MCCUSKEY, S. W. Variations in the Stellar Luminosity Function. IV. A Region in Cepheus-Lacerta	672
MCKELLAR, ANDREW, and N. R. TAWDE. Calculated Transition Probabilities for the C <sub>2</sub> Swan Bands	440
McKINLEY, D. W. R. Meteor Velocities Determined by Radio Observations	225
MACRAE, DONALD A., ROBERT FLEISCHER, and EDWIN B. WESTON. A Peculiar O Star at High Galactic Latitude	432
MEINEL, A. B. The Auroral Spectrum from 6200 to 8900 Å	583
MEINEL, A. B. Doppler-shifted Auroral Hydrogen Emission	50
MENZEL, DONALD H., and HARI K. SEN. Transfer of Radiation. II. Radiative Transfer in Absorption Lines	482
MENZEL, DONALD H., and HARI K. SEN. Transfer of Radiation. III. Reflection Effect in Eclipsing Binaries	490

MERRILL, PAUL W. Displaced Calcium Lines in the Spectrum of HD 190073 . . . . .	55
MERRILL, PAUL W. The Spectrum of BD+11°4673 during the Years 1942-1950 . . . . .	605
MERRILL, PAUL W., and WILLIAM C. MILLER. Spectroscopic Observations of Be Stars . . . . .	624
MILLER, WILLIAM C., and PAUL W. MERRILL. Spectroscopic Observations of Be Stars . . . . .	624
MIYAMOTO, S. Radiation Field of Extended Stellar Atmospheres . . . . .	181
MORGAN, W. W., and J. J. NASSAU. A Finding List of O and B Stars of High Luminosity . . . . .	141
MÜNCH, G., and S. CHANDRASEKHAR. On Stellar Statistics . . . . .	150
MÜNCH, LUIS. A Finding List of High-Luminosity Stars . . . . .	309
NASSAU, J. J., and W. W. MORGAN. A Finding List of O and B Stars of High Luminosity . . . . .	141
OSTERBROCK, DONALD, and STEWART SHARPLESS. Photographs with the Henyey-Greenstein Wide-Angle Camera . . . . .	222
OVENDEN, MICHAEL W., and ARTHUR BEER. $\zeta$ Aurigae: Photoelectric Observations of the Partial Phase at Egress on September 20, 1950 . . . . .	439
OXHOLM, M. L., J. H. SHAW, R. M. CHAPMAN, and J. N. HOWARD. A Grating Map of the Solar Spectrum from 3.0 to 5.2 Microns . . . . .	268
RICHARDSON, ROBERT S., and JESSE L. GREENSTEIN. Lithium and the Internal Circulation of the Sun . . . . .	536
ROSINO, L. The Spectra of Variables of the RV Tauri and Yellow Semiregular Types . . . . .	60
SANDAGE, ALLAN R., and ARMIN J. HILL. The Solar Curve of Growth for Lines of Cr I . . . . .	525
SANFORD, ROSCOE F. The Spectra and Orbits of AR Lacertae . . . . .	299
SCHWARZSCHILD, MARTIN, and HAROLD L. JOHNSON. On the Color-Magnitude Diagram for M 15 . . . . .	630
SEEGER, CHARLES L., and RALPH E. WILLIAMSON. The Pole of the Galaxy as Determined from Measurements at 205 Mc/Sec . . . . .	21
SEN, HARI K., and DONALD H. MENZEL. Transfer of Radiation. II. Radiative Transfer in Absorption Lines . . . . .	482
SEN, HARI K., and DONALD H. MENZEL. Transfer of Radiation. III. Reflection Effect in Eclipsing Binaries . . . . .	490
SHARMA, DEVENDRA. A New Band System of the $AlBr$ Molecule . . . . .	219
SHARMA, DEVENDRA. Two New Band Systems of the $AlCl$ Molecule . . . . .	210
SHARPLESS, STEWART, and DONALD OSTERBROCK. Photographs with the Henyey-Greenstein Wide-Angle Camera . . . . .	222
SHAW, J. H., R. M. CHAPMAN, J. N. HOWARD, and M. L. OXHOLM. A Grating Map of the Solar Spectrum from 3.0 to 5.2 Microns . . . . .	268
SLETTEBAK, ARNE. Lines of Neutral Oxygen in the Infrared Spectra of Be Stars . . . . .	436
SLETTEBAK, ARNE. Lines of Neutral Oxygen in the Infrared Spectra of Peculiar A Stars . . . . .	437
SMITH, J. LYNN, and GERALD E. KRON. Red and Infrared Magnitudes for 125 Stars in Ten Areas . . . . .	324
SPITZER, LYMAN, JR., and WALTER BAADE. Stellar Populations and Collisions of Galaxies . . . . .	413
SPITZER, LYMAN, JR., and DAVID R. BATES. The Density of Molecules in Interstellar Space . . . . .	441
STRAND, K. AA. The Orbit and Parallax of Procyon . . . . .	1
STRUVE, OTTO. Circumstellar Lines of Ca II in the Spectrum of $\epsilon$ Aurigae . . . . .	699
STRUVE, OTTO. The Velocity-Curve of 12 Lacertae . . . . .	589
TAWDE, N. R., and ANDREW MCKELLAR. Calculated Transition Probabilities for the $C_2$ Swan Bands . . . . .	440
THOMAS, R. N., H. EYRING, and M. A. COOK. The Physical Theory of Meteors. I. A Reaction-Rate Approach to the Rate of Mass Loss in Meteors . . . . .	475
VYSSOTSKY, A. N. Concerning Eggen's Parallaxes and Schlesinger's Probable Errors . . . . .	224
WEAVER, HAROLD F. The Identification of D'Agelet's Nova Sagittae of 1783 . . . . .	320
WEBER, NANCY E., LOUIS C. GREEN, and ELEANOR KRAWITZ. The Use of Calculated and Observed Energies in the Computation of Oscillator Strengths and the $f$ -Sum Rule . . . . .	690
WESTON, EDWIN B., DONALD A. MACRAE, and ROBERT FLEISCHER. A Peculiar O Star at High Galactic Latitude . . . . .	432
WHIPPLE, FRED L. A Comet Model. II. Physical Relations for Comets and Meteors . . . . .	464
WILLIAMSON, RALPH E., and CHARLES L. SEEGER. The Pole of the Galaxy as Determined from Measurements at 205 Mc/Sec . . . . .	21